

# ITS in the Maritime System

Anne D. Aylward

EG&G Technical Services

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# Federal MTS Role and Goals:

- Balance prosperity and security
- Balance national and local priorities
- Balance public and commercial priorities
- Guarantee safe cargo, vessels, and crews

# Institutional Complexity: What is a Port?

- A port is not an airport - there is no there there.
- Local Players: Port Authority, Terminal Operators, USCG, Local Authorities, Shippers, Truckers, others
- Federal Players: USCG, NOAA, USACE, MarAD, DOD
- International structure/international trade

# **Landside Transportation System Interface:**

- reduce congestion,
- enhance safety,
- mitigate environmental impact,
- enhance energy performance,
- improve productivity.

# Landside ITS

- With the enactment of ISTEA in 1991 Congress established the Intelligent Vehicle Highway System (later the ITS System)
- Required the unprecedented cooperation and long term commitment of public agencies and private organizations.
- Created the Joint Program Office within FHWA/DOT

# ITS Goals and Accomplishments

- National ITS Architecture.
- Development of national standards.
- Public and private sector collaboration.
- Metropolitan and state deployment.
- Recognition of freight and operations.
- ITS has captured the low hanging fruit:.

# ITS Institutional Barriers

- Deployments clearly suffer from lack of overall integration; more holistic approach necessary to achieve an integrated environment
- conflicting jurisdictions - federal, regional, state, local
- inadequate budgets
- incompatible systems

# Benefits of Maritime ITS

- improved safety and security
- increased efficiency - commercial and defense
- accurate real time information about waterway conditions - depth, weather, currents, tides
- traffic information
- consistent nationwide operating environment
- effective traffic management - congestion and emergencies



# Why ITS?

- Leverage Integrated Existing Systems and Services
- Manage at Regional Scale to increase system effectiveness
- Encourage public private Partnerships
- Create electronic linkage between vehicle and infrastructure

# Landside Lessons Learned: Institutional issues are key barriers

- awareness and perception of freight
- awareness of benefits of ITS
- long range operations and management challenges

# Key Maritime System Problems:

- human error is key
- aging vessels
- lack of standards
- inadequate infrastructure

# Individual Ports have unique Requirements

- diverse users
- intermodal connections/seamless technology

# Federal Role

- establish baseline standards - architecture
- national security standards
- provide funding

# Technology Breakthroughs

- mostly result of military R&D - radio aids to navigation , satellite navigation, radar,
- vision of future where computers, satellites, electronics depoloyed wisely and widely to provide new levels of navigation safety and security.

# ITS MTS Requirements

- Serious decision making relationship between federal government and port stakeholders
- Coordinated national policy for predictable funding of maritime physical and information infrastructure
- Agreed upon technical, operational, and performance standards
- Develop and maintain maritime information infrastructure - up-to-date charts, real time tide current and weather data, port specific navigational data, vessel to vessel and vessel to shore communication capability, hazmat tracking system.